ARIZONA GAME AND FISH DEPARTMENT
HERITAGE DATA MANAGEMENT SYSTEM

Plant Abstract **Element Code:** PDMAL140T0
Data Sensitivity: No

CLASSIFICATION, NOMENCLATURE, DESCRIPTION, RANGE

NAME: *Sphaeralcea gierischii* N.D. Atwood & C.L. Welsh
COMMON NAME: Gierisch globemallow
SYNONYMS:
FAMILY: Malvaceae

AUTHOR, PLACE OF PUBLICATION: Atwood, N.D. & S.L. Welsh, Novon 12(2): 161-163, f. 1. 2002.

TYPE LOCALITY: North of Black Rock Gulch, Mohave County, Arizona, U.S.A.

TYPE SPECIMEN: HT: BRY. N.D. Atwood, B. Furniss and L.C. Higgins 25293, 24 Apr 2000. IT: ARIZ, ASU, GH, MO, NY, RM, US.

TAXONOMIC UNIQUENESS:

DESCRIPTION: Perennial from a woody caudex, 4.3-10.3 dm (17-41 in) tall. The stems often dark red-purple, are produced in tall, open clumps, and are only sparingly leafy. The main foliage leaves in the lower portion of the stems are large, with the central lobe greatly elongated and having a long-crenuate base. The herbage is bright green, and the pubescence on the herbage is very sparse, and on the calyces consists of one or a few trichomes when any hairs are present at all. Leaf blades are 1.2-4.0 x 1.0-5.0 cm (0.5-1.6 x 0.4-2.0 in), usually longer than wide, ovate to cordate-ovate in outline, the base cordate to truncate or obtuse, 3- to 5-lobed, the main division entire or cleft or parted to irregularly toothed. The inflorescence is thyrsoid (open), with usually more than 1 flower per node, or glomerate-paniculate with 2 to 5 flowers on axillary peduncles; pedicels shorter than too much longer than the calyx (to 7 cm long); bracteoles are linear, often red-purple and contrasting with the calyx. The calyx is 5-10 mm long, green, becoming stramineous in fruit, uniformly glabrous externally (or rarely with one or few stellate hairs), the rays of hairs mainly radiating in a single plane, the lobes ovate to lance-acuminate. Petals are 15-25 mm long, orange (grenadine); carpels 10-15, 4.5-5.5 mm high, reticulate portion forming from 2/5 to 3/5 of the lower portion of the carpel, reticulate on the sides. (Atwood and Welsh, 2002).

AIDS TO IDENTIFICATION: Although they both share an open inflorescence, *Sphaeralcea gierischii* differs from *S. rusbyi* (Rusby globemallow) by its larger flowers (15-25 mm), and glabrous or glabrescent herbage with few or no stellate hairs (if any, confined to leaf margins). It differs from *S. moorei* in having 3- to 5-paqrted narrow leaf lobes and bright green leaves sometimes suffused with red-purple, (Utah Native Plant Society (UNPS), 2003-2005). *S.*

ambigua (desert globemallow) differs vastly from *S. gierischii* in its dense white to yellow canescent, thick, usually rugose, prominent veined, deltoid to nearly orbicular cordate-based leaves, short pedicels, and larger prominent reticulate carpels (12-16 mm high). (Atwood and Welsh, 2002).

ILLUSTRATIONS: Line drawing from holotype (*in* Atwood and Welsh, 2002: fig. 1)
Line Drawing (*in* UNPS, 2003-2005)
Color photos of plant and habitat (L. Hughes, *in* UNPS, 2003-2005)
Color photos of plant and habitat (A. Frates, *in* UNPS supplemental information, 2003-2005)
Color photo of plant in habitat (W. Hunter, *in* UNPS supplemental information, 2003-2005)
Color photo of Isotype (Atwood and Furniss, US-3376462, *in* http://ravenel.si.edu/botany/types//fullRecords.cfm?myFamily=)
Color photo of Isotypes (NYBG, *in* http://scisun.nybg.org:8890/searchdb/owa/wwwspecimen.search_list?)

TOTAL RANGE: Endemic to Washington County, in southwestern Utah, and Mohave County, in northern Arizona.

RANGE WITHIN ARIZONA: Mohave County, vicinity of Black Rock Gulch, Black Knolls, and Pigeon Canyon

SPECIES BIOLOGY AND POPULATION TRENDS

GROWTH FORM: Perennial.

PHENOLOGY:

BIOLOGY:

HABITAT: Warm desert shrub community, mainly on gypsiferous outcrops of the Harrisburg Member of the Kaibab Formation, at ca. 1090m, where it is scarcely scattered. Also collected on the Moenkopi Formation.

ELEVATION: 3,000 – 4,262 feet (915-1300 m). In Utah, around 2,400 feet (732 m) elevation.

EXPOSURE: Collected on N-facing slope of 5-30%.

SUBSTRATE: Gray gypsiferous outcrops. Clay to gravelly soil.

PLANT COMMUNITY: Blackbrush-Larrea-Yucca and Larrea-Coleogyne-mixed shrub communities. Associated species include: *Atriplex* (saltbush), *Coleogyne ramosissima* (blackbush), *Dalea* (prairie-clover), Ephedra (Mormon tea), *Hymenoclea* (burrow-brush), *Larrea tridentata* (creosotebush), *Lycium* (desert-thorn), *Opuntia*, *Petalonyx* (sandpaper-plant), *Psorothamnus* (indigo bush), *Purshia* (cliffrose), and *Yucca*. (SEINet, accessed 2005).

POPULATION HISTORY AND TRENDS: Unknown. A newly described species that is rare, but locally common. One population located on 15-20 acres in Arizona in 2001, consisted of 5,000-9,000 plants. Another 4 transects in nearby sections revealed approximately 200 plants. (Lee Hughes, monitoring information).

SPECIES PROTECTION AND CONSERVATION

ENDANGERED SPECIES ACT STATUS: None
STATE STATUS: None
OTHER STATUS: None

MANAGEMENT FACTORS:

PROTECTIVE MEASURES TAKEN:

SUGGESTED PROJECTS:

LAND MANAGEMENT/OWNERSHIP: BLM – Arizona Strip Field Office.

SOURCES OF FURTHER INFORMATION

REFERENCES:

Atwood, N.D., and S.L. Welsh. 2002. Overview of *Sphaeralcea* (Malvaceae) in Southern Utah and Northern Arizona, U.S.A., and Description of a New Species. Novon, 12(2): 159-166.

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Utah Native Plant Society. 2003-2005. Utah Rare Plant Guide. Salt Lake City, UT: Utah Rare Plant Guide Home Page. http://www.utahrareplants.org.

MAJOR KNOWLEDGEABLE INDIVIDUALS:

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S.L. Welsh – Brigham Young University, Provo, Utah.

ADDITIONAL INFORMATION:

Specific epithet honors the late Ralph K. Gierisch, ardent collector of plants in the Intermountain West for more than five decades, who spent several years in the latter part of the century (1970s and 1980s) investigating the flora of the Mohave Strip, Mohave County, Arizona. He made the first collection of the species in 1978.

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